

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-130566-1

Client Project/Site: GKM - Blow Out Project

For:

Weston Solutions, Inc.

1435 Garrison Street

Suite 100

Lakewood, Colorado 80215

Attn: Mr. James Fieman



Authorized for release by:

10/27/2016 3:14:29 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Method Summary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	TAL SAV
200.8	Metals (ICP/MS)	EPA	TAL SAV
245.1	Mercury (CVAA)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Sample Summary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-130566-1	GKMSW_GSTO_092716	Water	09/27/16 09:40	10/07/16 07:30

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TestAmerica Savannah

Definitions/Glossary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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Case Narrative

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Job ID: 680-130566-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: Weston Solutions, Inc.

Project: GKM - Blow Out Project

Report Number: 680-130566-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/07/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.6 C.

TOTAL METALS (ICP)

Sample GKMSW_GSTO_092716 (680-130566-1) was analyzed for total metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/25/2016 and analyzed on 10/26/2016 and 10/27/2016.

Calcium, Potassium and Sodium failed the recovery criteria high for the MS of sample GKMSW_GSTO_092716MS (680-130566-1) in batch 680-455179.

Calcium failed the recovery criteria low for the MSD of sample GKMSW_GSTO_092716MSD (680-130566-1) in batch 680-455179. Potassium and Sodium failed the recovery criteria high.

Refer to the QC report for details.

Sample GKMSW_GSTO_092716 (680-130566-1)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICPMS)

Sample GKMSW_GSTO_092716 (680-130566-1) was analyzed for total metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/25/2016 and analyzed on 10/26/2016.

Copper was detected in method blank MB 680-454740/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. .

Manganese and Zinc failed the recovery criteria high for the MS of sample GKMSW_GSTO_092716MS (680-130566-1) in batch 680-455091.

Copper failed the recovery criteria low for the MSD of sample GKMSW_GSTO_092716MSD (680-130566-1) in batch 680-455091. Manganese and Zinc failed the recovery criteria high.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Case Narrative

Client: Weston Solutions, Inc.

Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Job ID: 680-130566-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Refer to the QC report for details.

Sample GKMSW_GSTO_092716 (680-130566-1)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample GKMSW_GSTO_092716 (680-130566-1) was analyzed for total mercury in accordance with EPA Method 245.1. The samples were prepared and analyzed on 10/20/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Client Sample ID: GKMSW_GSTO_092716

Lab Sample ID: 680-130566-1

Matrix: Water

Date Collected: 09/27/16 09:40

Date Received: 10/07/16 07:30

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3300		200	24	ug/L		10/25/16 14:46	10/26/16 23:33	1
Calcium	410000		500	25	ug/L		10/25/16 14:46	10/26/16 23:33	1
Iron	10000		50	17	ug/L		10/25/16 14:46	10/26/16 23:33	1
Magnesium	14000		500	33	ug/L		10/25/16 14:46	10/26/16 23:33	1
Potassium	2700	F1	1000	17	ug/L		10/25/16 14:46	10/26/16 23:33	1
Sodium	96000		10000	4800	ug/L		10/25/16 14:46	10/27/16 13:00	10

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.51	J	1.0	0.40	ug/L		10/25/16 14:46	10/26/16 16:19	1
Arsenic	3.4		1.0	0.37	ug/L		10/25/16 14:46	10/26/16 16:19	1
Barium	7.6		2.0	0.14	ug/L		10/25/16 14:46	10/26/16 16:19	1
Beryllium	0.84		0.40	0.15	ug/L		10/25/16 14:46	10/26/16 16:19	1
Cadmium	16		0.50	0.043	ug/L		10/25/16 14:46	10/26/16 16:19	1
Chromium	1.0	U	2.0	1.0	ug/L		10/25/16 14:46	10/26/16 16:19	1
Cobalt	20		0.40	0.12	ug/L		10/25/16 14:46	10/26/16 16:19	1
Copper	580	B	5.0	0.50	ug/L		10/25/16 14:46	10/26/16 16:19	1
Lead	2.9		0.30	0.060	ug/L		10/25/16 14:46	10/26/16 16:19	1
Manganese	11000		130	60	ug/L		10/25/16 14:46	10/26/16 18:43	50
Molybdenum	0.90	J	1.0	0.45	ug/L		10/25/16 14:46	10/26/16 16:19	1
Nickel	13		5.0	0.40	ug/L		10/25/16 14:46	10/26/16 16:19	1
Selenium	0.58	U	2.0	0.58	ug/L		10/25/16 14:46	10/26/16 16:19	1
Silver	0.10	U	1.0	0.10	ug/L		10/25/16 14:46	10/26/16 16:19	1
Thallium	0.15	J	0.20	0.10	ug/L		10/25/16 14:46	10/26/16 16:19	1
Vanadium	2.5		1.0	0.30	ug/L		10/25/16 14:46	10/26/16 16:19	1
Zinc	3900		1000	140	ug/L		10/25/16 14:46	10/26/16 18:43	50

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		10/20/16 09:48	10/20/16 15:30	1

QC Sample Results

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 680-454744/1-A

Matrix: Water

Analysis Batch: 455089

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 454744

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	24	U	200	24	ug/L		10/25/16 14:46	10/26/16 23:20	1
Calcium	25	U	500	25	ug/L		10/25/16 14:46	10/26/16 23:20	1
Iron	17	U	50	17	ug/L		10/25/16 14:46	10/26/16 23:20	1
Magnesium	33	U	500	33	ug/L		10/25/16 14:46	10/26/16 23:20	1
Potassium	17	U	1000	17	ug/L		10/25/16 14:46	10/26/16 23:20	1
Sodium	480	U	1000	480	ug/L		10/25/16 14:46	10/26/16 23:20	1

Lab Sample ID: LCS 680-454744/2-A

Matrix: Water

Analysis Batch: 455089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 454744

Analyte	Spike		LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
	Added							
Aluminum	2000		1930		ug/L		96	85 - 115
Calcium	2000		1920		ug/L		96	85 - 115
Iron	2000		1930		ug/L		97	85 - 115
Magnesium	2000		1900		ug/L		95	85 - 115
Potassium	2000		2210		ug/L		110	85 - 115
Sodium	2000		1780		ug/L		89	85 - 115

Lab Sample ID: 680-130566-1 MS

Matrix: Water

Analysis Batch: 455089

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454744

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Aluminum	3300		2000	5410		ug/L		104	75 - 125
Calcium	410000		2000	413000	4	ug/L		239	75 - 125
Iron	10000		2000	12100	4	ug/L		97	75 - 125
Magnesium	14000		2000	16400	4	ug/L		100	75 - 125
Potassium	2700	F1	2000	5670	F1	ug/L		147	75 - 125

Lab Sample ID: 680-130566-1 MS

Matrix: Water

Analysis Batch: 455179

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454744

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Sodium	96000		2000	104000	4	ug/L		374	75 - 125

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 455089

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454744

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Aluminum	3300		2000	5370		ug/L		102	75 - 125	1	20
Calcium	410000		2000	408000	4	ug/L		-22	75 - 125	1	20
Iron	10000		2000	12000	4	ug/L		94	75 - 125	1	20
Magnesium	14000		2000	16200	4	ug/L		91	75 - 125	1	20
Potassium	2700	F1	2000	5590	F1	ug/L		142	75 - 125	2	20

TestAmerica Savannah

QC Sample Results

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 455179

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454744

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				247			
Sodium	96000		2000	101000	4	ug/L				2		20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 680-454740/1-A

Matrix: Water

Analysis Batch: 455091

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 454740

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	0.40	U	1.0	0.40	ug/L		10/25/16 14:46	10/26/16 16:11	1
Arsenic	0.37	U	1.0	0.37	ug/L		10/25/16 14:46	10/26/16 16:11	1
Barium	0.14	U	2.0	0.14	ug/L		10/25/16 14:46	10/26/16 16:11	1
Beryllium	0.15	U	0.40	0.15	ug/L		10/25/16 14:46	10/26/16 16:11	1
Cadmium	0.043	U	0.50	0.043	ug/L		10/25/16 14:46	10/26/16 16:11	1
Chromium	1.0	U	2.0	1.0	ug/L		10/25/16 14:46	10/26/16 16:11	1
Cobalt	0.12	U	0.40	0.12	ug/L		10/25/16 14:46	10/26/16 16:11	1
Copper	0.748	J	5.0	0.50	ug/L		10/25/16 14:46	10/26/16 16:11	1
Lead	0.060	U	0.30	0.060	ug/L		10/25/16 14:46	10/26/16 16:11	1
Manganese	1.2	U	2.5	1.2	ug/L		10/25/16 14:46	10/26/16 16:11	1
Molybdenum	0.45	U	1.0	0.45	ug/L		10/25/16 14:46	10/26/16 16:11	1
Nickel	0.40	U	5.0	0.40	ug/L		10/25/16 14:46	10/26/16 16:11	1
Selenium	0.58	U	2.0	0.58	ug/L		10/25/16 14:46	10/26/16 16:11	1
Silver	0.10	U	1.0	0.10	ug/L		10/25/16 14:46	10/26/16 16:11	1
Thallium	0.10	U	0.20	0.10	ug/L		10/25/16 14:46	10/26/16 16:11	1
Vanadium	0.30	U	1.0	0.30	ug/L		10/25/16 14:46	10/26/16 16:11	1
Zinc	2.8	U	20	2.8	ug/L		10/25/16 14:46	10/26/16 16:11	1

Lab Sample ID: LCS 680-454740/2-A

Matrix: Water

Analysis Batch: 455091

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 454740

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier					
Antimony	20.0	19.8		ug/L		99	85 - 115	
Arsenic	40.0	39.4		ug/L		98	85 - 115	
Barium	40.0	38.5		ug/L		96	85 - 115	
Beryllium	20.0	20.3		ug/L		101	85 - 115	
Cadmium	20.0	20.3		ug/L		101	85 - 115	
Chromium	40.0	39.4		ug/L		98	85 - 115	
Cobalt	20.0	20.3		ug/L		102	85 - 115	
Copper	40.0	39.8		ug/L		100	85 - 115	
Lead	200	195		ug/L		98	85 - 115	
Manganese	200	204		ug/L		102	85 - 115	
Molybdenum	40.0	38.5		ug/L		96	85 - 115	
Nickel	40.0	39.6		ug/L		99	85 - 115	
Selenium	40.0	38.6		ug/L		96	85 - 115	
Silver	20.0	20.9		ug/L		105	85 - 115	
Thallium	16.0	16.1		ug/L		101	85 - 115	
Vanadium	40.0	38.9		ug/L		97	85 - 115	

TestAmerica Savannah

QC Sample Results

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-454740/2-A

Matrix: Water

Analysis Batch: 455091

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Zinc	40.0	41.5		ug/L	104	85 - 115	

Lab Sample ID: 680-130566-1 MS

Matrix: Water

Analysis Batch: 455091

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Antimony	0.51	J	20.0	20.5		ug/L	100	70 - 130	
Arsenic	3.4		40.0	43.4		ug/L	100	70 - 130	
Barium	7.6		40.0	45.9		ug/L	96	70 - 130	
Beryllium	0.84		20.0	18.7		ug/L	89	70 - 130	
Cadmium	16		20.0	35.7		ug/L	98	70 - 130	
Chromium	1.0	U	40.0	42.1		ug/L	105	70 - 130	
Cobalt	20		20.0	41.5		ug/L	109	70 - 130	
Copper	580	B	40.0	616	4	ug/L	87	70 - 130	
Lead	2.9		200	201		ug/L	99	70 - 130	
Molybdenum	0.90	J	40.0	35.9		ug/L	87	70 - 130	
Nickel	13		40.0	52.4		ug/L	99	70 - 130	
Selenium	0.58	U	40.0	41.5		ug/L	104	70 - 130	
Silver	0.10	U	20.0	19.3		ug/L	97	70 - 130	
Thallium	0.15	J	16.0	16.3		ug/L	101	70 - 130	
Vanadium	2.5		40.0	45.7		ug/L	108	70 - 130	

Lab Sample ID: 680-130566-1 MS

Matrix: Water

Analysis Batch: 455091

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Manganese	11000		200	11400	4	ug/L	382	70 - 130	
Zinc	3900		40.0	4100	4	ug/L	631	70 - 130	

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 455091

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Antimony	0.51	J	20.0	20.3		ug/L	99	70 - 130	1	20	
Arsenic	3.4		40.0	43.6		ug/L	100	70 - 130	1	20	
Barium	7.6		40.0	44.9		ug/L	93	70 - 130	2	20	
Beryllium	0.84		20.0	17.8		ug/L	85	70 - 130	5	20	
Cadmium	16		20.0	34.9		ug/L	94	70 - 130	2	20	
Chromium	1.0	U	40.0	41.5		ug/L	104	70 - 130	1	20	
Cobalt	20		20.0	41.3		ug/L	108	70 - 130	0	20	
Copper	580	B	40.0	600	4	ug/L	46	70 - 130	3	20	
Lead	2.9		200	198		ug/L	97	70 - 130	2	20	
Molybdenum	0.90	J	40.0	35.0		ug/L	85	70 - 130	2	20	
Nickel	13		40.0	52.2		ug/L	98	70 - 130	0	20	
Selenium	0.58	U	40.0	42.2		ug/L	106	70 - 130	2	20	
Silver	0.10	U	20.0	19.0		ug/L	95	70 - 130	2	20	

TestAmerica Savannah

QC Sample Results

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 455091

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454740

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Thallium	0.15	J	16.0	15.7		ug/L		97	70 - 130	3	20
Vanadium	2.5		40.0	45.1		ug/L		107	70 - 130	1	20

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 455091

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454740

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Manganese	11000		200	11400	4	ug/L		410	70 - 130	0	20
Zinc	3900		40.0	4120	4	ug/L		673	70 - 130	0	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 680-454035/1-A

Matrix: Water

Analysis Batch: 454214

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 454035

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.080	U	0.20	0.080	ug/L		10/20/16 09:48	10/20/16 15:07	1

Lab Sample ID: LCS 680-454035/3-A

Matrix: Water

Analysis Batch: 454214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 454035

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Mercury	2.50	2.59		ug/L		104	85 - 115

Lab Sample ID: 680-130566-1 MS

Matrix: Water

Analysis Batch: 454214

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454035

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	0.080	U	1.00	1.12		ug/L		112	70 - 130

Lab Sample ID: 680-130566-1 MSD

Matrix: Water

Analysis Batch: 454214

Client Sample ID: GKMSW_GSTO_092716

Prep Type: Total/NA

Prep Batch: 454035

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	0.080	U	1.00	1.15		ug/L		115	70 - 130

QC Association Summary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Metals

Prep Batch: 454035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	245.1	
MB 680-454035/1-A	Method Blank	Total/NA	Water	245.1	
LCS 680-454035/3-A	Lab Control Sample	Total/NA	Water	245.1	
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	245.1	
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	245.1	

Analysis Batch: 454214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	245.1	454035
MB 680-454035/1-A	Method Blank	Total/NA	Water	245.1	454035
LCS 680-454035/3-A	Lab Control Sample	Total/NA	Water	245.1	454035
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	245.1	454035
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	245.1	454035

Prep Batch: 454740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200	
MB 680-454740/1-A	Method Blank	Total/NA	Water	200	
LCS 680-454740/2-A	Lab Control Sample	Total/NA	Water	200	
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200	
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200	

Prep Batch: 454744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200	
MB 680-454744/1-A	Method Blank	Total/NA	Water	200	
LCS 680-454744/2-A	Lab Control Sample	Total/NA	Water	200	
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200	
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200	

Analysis Batch: 455089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744
MB 680-454744/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	454744
LCS 680-454744/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	454744
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744

Analysis Batch: 455091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740
MB 680-454740/1-A	Method Blank	Total/NA	Water	200.8	454740
LCS 680-454740/2-A	Lab Control Sample	Total/NA	Water	200.8	454740
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200.8	454740

QC Association Summary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Metals (Continued)

Analysis Batch: 455179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-130566-1	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744
680-130566-1 MS	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744
680-130566-1 MSD	GKMSW_GSTO_092716	Total/NA	Water	200.7 Rev 4.4	454744

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Lab Chronicle

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Client Sample ID: GKMSW_GSTO_092716

Lab Sample ID: 680-130566-1

Matrix: Water

Date Collected: 09/27/16 09:40

Date Received: 10/07/16 07:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200			50 mL	50 mL	454744	10/25/16 14:46	AJR	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		1			455089	10/26/16 23:33	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	454744	10/25/16 14:46	AJR	TAL SAV
Total/NA	Analysis	200.7 Rev 4.4		10			455179	10/27/16 13:00	BCB	TAL SAV
		Instrument ID: ICPE								
Total/NA	Prep	200			50 mL	50 mL	454740	10/25/16 14:46	AJR	TAL SAV
Total/NA	Analysis	200.8		1			455091	10/26/16 16:19	BJB	TAL SAV
		Instrument ID: ICPMSD								
Total/NA	Prep	200			50 mL	50 mL	454740	10/25/16 14:46	AJR	TAL SAV
Total/NA	Analysis	200.8		50			455091	10/26/16 18:43	BJB	TAL SAV
		Instrument ID: ICPMSD								
Total/NA	Prep	245.1			50 mL	50 mL	454035	10/20/16 09:48	JKL	TAL SAV
Total/NA	Analysis	245.1		1			454214	10/20/16 15:30	JKL	TAL SAV
		Instrument ID: LEEMAN2								

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TestAmerica Savannah

USEPA

Dateshinned: 10/15/2016

ပရန်မြို့အောင်

CarrierName:

Lah Zin: 31401

CHAIN OF CUSTODY RECORD

Gold King Sampling With NMED/CO

Contact Name: James Eijman

Contact Phone: 3033016506

Special Instructions: Hold sample until you receive instruction to analyze.

Special Instructions: Hold sample until you receive instruction to analyze.	SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #
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680-130566

3.6°C # 5592

Login Sample Receipt Checklist

Client: Weston Solutions, Inc.

Job Number: 680-130566-1

Login Number: 130566

List Source: TestAmerica Savannah

List Number: 1

Creator: Cai, Meiyun Y

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6°C 5592
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Weston Solutions, Inc.
Project/Site: GKM - Blow Out Project

TestAmerica Job ID: 680-130566-1

Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Colorado	State Program	8	N/A	12-31-16

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